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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,474	09/30/2003	Albert A. Panyard	PAA-100-A	6003

21828 7590 12/19/2005

CARRIER BLACKMAN AND ASSOCIATES
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NOVI, MI 48375

EXAMINER

LEE, EDMUND H

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,474

Applicant(s)

PANYARD, ALBERT A.

Examiner

EDMUND H. LEE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 16-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/29/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election with traverse of claims 1-15 in the reply filed on 12/21/05 is acknowledged. The traversal is on the ground(s) that there is no serious burden. This is not found persuasive because it too demanding of the examiner to search and examine two distinct inventions with different claimed limitations.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 16-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/21/05.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 1366631 in view of Rittenhouse (USPN 67019027). In regard to claim 1, GB 1366631 teach the basic claimed process including a method of making a heat transfer device (pg 1, lns 42-44 and 83-87; pg 2, lns 26-62; fig 1); forming tubing of a curable material, i.e., silicone (pg 1, lns 42-44 and 83-87; pg 2, lns 26-62; fig 1)—as a note, it should be noted that it inherent that the tubes of GB 1366631 were formed; arranging the tubing into a desired shape such that surfaces of adjacent sections of the tubing are in contact

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with each other (pg 1, lns 42-44 and 83-87; pg 2, lns 26-62; fig 1); and cementing the shaped tubing while in the desired shape such that contacting surfaces of the adjacent sections are bonded together (pg 1, lns 42-44 and 83-87; pg 2, lns 26-62; fig 1). GB 1366631, however, does not teach arranging the tubing while it is in a substantially uncured state; and curing the shaped tubing. Rittenhouse teaches the well-known understanding of bonding partially cured tubing together by curing produces a bond of increased mechanical integrity of the connection (col 4, lns 47-56). GB 1366631 and Rittenhouse are combinable because they are analogous with respect to bonding tubing. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the above teaching of Rittenhouse in the process of GB 1366631 in order to increase the mechanical integrity of the bond between the tubing of GB 1366631. In regard to claim 2, such is well-known in the molding art in order to ensure desired design. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to arrange the tubing of GB 1366631 on a surface of a mold in order to ensure the desired design. In regard to claim 3, GB 1366631 teaches using a flexible elastomeric material as the curable material (pg 1, lns 42-44 and 83-87; pg 2, lns 26-62; fig 1). In regard to claim 4, such is taught by the combination of GB 1366631 and Rittenhouse. In regard to claim 5, such is taught by the combination of GB 1366631 and Rittenhouse. In regard to claim 6, such is well-known in the molding art in order to ensure greater and better contact. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to force the tubing of GB 1366631 against each other prior or during the bonding step in

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order to ensure greater and better contact. In regard to claim 7, such is well-known in the molding art in order to ensure better contact between sections at correct locations during its use. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to flow a pressurized medium into the tubing of GB 1366631 in order to ensure better contact between contacting sections of the tubing of GB 1366631. In regard to claims 8 and 9, curing temperature is well-known in the molding art and can be determined by routine experimentation. Further, the claimed condition is well-known in the molding art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to cure the tubing of GB 1366631 (modified) at the claimed condition in order to ensure proper curing and bonding of the tubing. In regard to claim 10, the specific diameter of the tubing is a mere obvious matter of choice dependent on the desired final product and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process. Further, tubing having the claimed diameter is well-known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a tubing having the claimed diameter in the process of GB 1366631 in order to achieve a desired level of heat transfer. In regard to claim 11, the desired shape of the mold tubing is a mere obvious matter of choice dependent on the desired final product and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process. Further, the desired mold shape is well-known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a mold having a given

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body part shape in the process of GB 1366631 in order to produce a highly effective heat transfer device. In regard to claim 12, such is well-known in the molding art in order to ensure greater and better contact. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply pressure to the tubing of GB 1366631 prior or during the bonding step in order to ensure greater and better contact. In regard to claim 13, it is well-known in the molding art to use pneumatic pressure or mechanical pressure to apply pressure. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply pneumatic or mechanical pressure to the tubing of GB 1366631 in order to increase bonding between the tubing of GB 1366631. In regard to claim 14, such is well-known in the molding art to apply pressure to either an internal or external surface of a preform. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply an internal pressure or external pressure to the tubing of GB 1366631 in order to enhance the bonding between the tubing sections of GB 1366631. In regard to claim 15, GB 1366631 teaches using a single continuous length of tubing (pg 1, lns 42-44 and 83-87; pg 2, lns 26-62; fig 1).

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 4277432 teaches bonding a partially cured silicone tubing to a preform by curing. USPN 4239245 teaches using a mold to achieve a desired shape of a partially cured preform; and curing the partially cured preform while in the mold and under pressure.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571.272.1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EHL

EDMUND H. LEE
Primary Examiner
Art Unit 1732



12/12/05